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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,184	06/30/2003	Hyoung-il Kim	1293.1726	8789
21171	7590	10/19/2005	EXAMINER	
STAAS & HALSEY LLP			HIRUY, ELIAS	
SUITE 700			ART UNIT	
1201 NEW YORK AVENUE, N.W.			PAPER NUMBER	
WASHINGTON, DC 20005			2837	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/608,184	KIM, HYOUNG-IL	
	Examiner	Art Unit	
	Elias B. Hiruy	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/16/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Response to Argument**

1. Applicant's arguments filed on 06/24/05 is received and entered into record.
2. An initialed and dated copy of Applicant's IDS PTO-1449 filed on 08/16/05 is attached to the instant Office action.
3. Claims 3, 6, 8, 12, 14, and 15 rejection under 35 U.S.C. 112, first paragraph, is withdrawn in view of applicant's argument and further review of the specification.
4. Claim 16 rejection is withdrawn since the claim is cancelled without prejudice or disclaimer.
5. Rejection of claims 1, 4 and 11 under 35 U.S.C. 102 (b) is maintained and rewritten to show that the claims as broadly claimed read on the prior art.
6. Rejection of claim 7 and 9-10 under 35 U.S.C. 103 (a) is withdrawn per further review of the foreign documents which were relied upon in the previous office action and in view of applicant argument.
7. Regarding claim 13 the rejection is withdrawn in view of applicant argument and further review of the prior art.
8. Applicants argument and remarks are fully considered based on their merits and are the reasons for the following rejection or allowance.

**Information Disclosure Statement**

9. An initialed and dated copy of Applicant's IDS form 1449 is attached to the instant Office action.

**Claim Rejections - 35 USC § 112**

- The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Regarding claims 4 and 7, the phrase "most similar to" renders the claim(s) indefinite because the claim(s) include(s) limitations not actually disclosed (those encompassed by "most similar to"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

11. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, 4, 7, and 11 the above-cited independent claims teach about a method of "calculating N control algorithms," yet the claims do not clearly define the N control algorithms. N as claimed herein can take any value including zero in which case the claims would read on several motor control method. Hence, the failure of the claims to clearly show what the meet and bounds of the claimed invention makes the claims indefinite. The examiner has presumed a value of N=1 in order to further the prosecution of the application on its merit as claimed broadly herein.

Claims 2-3, 5-6, 8-10, and 12 suffer from the same deficiency as stated above since this claims directly or indirectly depend on claim 1, 4, 7, and 11.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-6 and 11-12 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sannomiya Akio JP 62-077889.

Regarding claims 1 and 11, Sannomiya Akio teaches about a method of controlling a motor (DC motor 10, page 3 lines 18-20) driving system. The methods involve calculating N (where N=1) control algorithms (page 4 lines 2-5), from initial value memorized in memory storage 16 (page 4 lines 2-5), corresponding to N external environment (i.e. motor driving conditions)(Page 3 lines 22-26; Abstract lines 6-9). Driving the motor under N motor driving environments by using one of the calculated algorithms, calculating a constant velocity motor data, delta PTiw (i.e. performance indexes; page 4 lines 31-32 and page 5 lines 1-6), by using predetermined control factors (delta Vj, page 4 lines 20-22) which are detected when driving the motor using the algorithm under the N motor driving environments. In addition, storing the calculated N control algorithms and the performance indexes corresponding to each of the N motor driving conditions in memory storage 17 (page 5 lines 1-6; Abstract lines 13-21).

Regarding claim 4, Sannomiya Akio drives the motor by applying the base controller stored in memory 16 (page 4 line 2-5). Further, the detected velocity variation ( $\Delta V_j$ , page 4 lines 20-22) detected by driving the motor is converted into system performance information that is stored as a distribution state in the deviation value distribution storage part 15 (page 4 lines 24-27). The stored distribution state and the initial value data are compared and compensated to form an optimum controller under the driving condition (page 5, lines 1-6).

Regarding claim 2 and 5, Sannomiya assigns predetermined weights (K, G, M, J) to each of the predetermined control factors (velocity variation  $\Delta V_j$ ). In addition, the disclosure shows that the performance index is calculated by combining the predetermined control factors to which the weights are assigned using formula 1 on page 4.

Regarding claim 3, 6 and 12, Sannomiya uses velocity variation (i.e. Velocity ripple) as the predetermined control factors.

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

13. Claims 13-15 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Tazawa et al (US 6,844,693).

Regarding claim 13, Tazawa et al discloses a plurality of driving environment, position and speed. Further, the disclosure shows a plurality of controllers (a control parameter adjustment section having a plurality of sets of control parameters; column 39 lines 63-67 and column 40 lines 1-7) pre-designed based on driving environment. At least one controller of the plurality of controllers is selected to control a specific driving environment of the driving environments using the control parameters (control factors; column 12 lines 32-46; column 40 lines 45-47).

Regarding claim 14 and 15, Tazawa et al shows one of the control factors as a position accuracy (column 11 lines 4-9), and predetermined weights are assigned to each control factor (column 12 lines 32-40). Said weights being determined from a stored reference data ranges for several control factors and assigning a corresponding points when the control factors are included in the range (column 12 lines 32-40).

**Allowable Subject Matter**

14. Claims 7-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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**Remarks**

15. No claim is allowed.

**Conclusion**

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to attached PTO-892 form.

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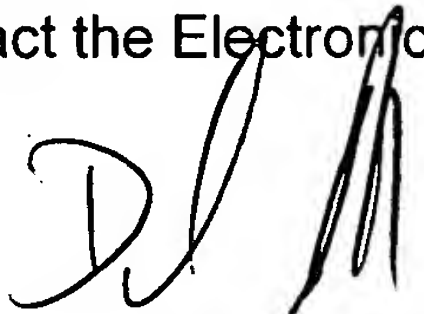
**Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias B. Hiruy whose telephone number is 571-272-6105. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EH

10/04/2005

  
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